# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/660,824 | 09/13/2000 | Alan Rowe | 103.1046.01 | 7793 |

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| EXAMINER |
|---|
| HOANG, PHUONG N |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2194 | |

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 09/660,824 | ROWE, ALAN |
| | Examiner | Art Unit |
| | Phuong N. Hoang | 2194 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *28 April 2005*.

2a)☐ This action is **FINAL**.  2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1 - 42, and 48 - 53* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 42, and 48 - 53* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

## DETAILED ACTION

1.      Claims 1 – 42, and 48 - 53 are pending for examination.

### *Claim Rejections - 35 USC § 103*

2.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.      **Claims 1 – 4, 8, 12, 16, 21 – 25, 29, 33, 37, 42, 52 - 53 are rejected under 35**

**U.S.C. 103(a) as being unpatentable over French, US patent no. 6,341,312.**

4.      French was cited in the last office action.

5.      **As to claim 1,** French teaches a method of operating a file server, comprising

the steps of:

receiving a CIFS request at the file server (CIFS client access network devices

located on servers, col. 3 lines 25 – 50);

recording a state at the file server about the request (the per server session

structure 58 maintains state information with respect to the server to which the user is

connecting, col. 5 lines 1 - col. 6 line 10) the state including information regarding a

persistent connection between the server and a client device;

restoring the state of the file server upon reboot as last recorded (reconnect

without requiring the user to re-enter information, col. 5 and col. 6 lines 1 – 26);

attempting to continue the CIFS session between at least one client device and

the file server that the request was part of (reestablish the connections, replays the

connections, col. 6 lines 20 – 48), wherein the client device is unaware of the attempting

(reconnection is transparent because it is effected without the user's awareness, col. 6

lines 20 – 27).

French does not explicitly teach that the state about the request is recording at

the time of receiving.   However, French teaches the state information respect to the

server to which the user is connecting (col. 5 lines 1 – col. col. 6 lines 10).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to recognize that the information about the user is connecting has

to be recorded dynamically to have the session establishment request and information

of the user connection.


6.      **As to claim 2,** French teaches the steps of acknowledging receipt of the CIFS

request; processing the CIFS request (session establishment request is stored

...."permanent", col. 6 lines 5 – 10).

7.     **As to claim 3**, French teaches the step of recording state includes determining

automatically whether the processing of a CIFS request is at a point where the state can

be reliably recorded (it is inherent in maintaining the state information).


8.     **As to claim 4,** French teaches the step of recording state occurs at points based

or the progress of processing of a CIFS request (CIFS, col. 3 lines 25 – 50).


9.     **As to claim 8,** French teaches the step of recording state further comprises the

step of determining whether the server shutdown was elective or non-elective (an

interrupt …. test outcome is negative or positive, col. 6 lines 10 – 20).


10.    **As to claim 12,** French teaches the step of wherein the step of recording state

further comprises the step of determining whether recovery will be accomplished by

rebooting the affected server (the machine is rebooted, col. 6 lines 40 – 45).


11.    **As to claim 16,** see rejection for claim 12 above.


12.    **As to claim 21**, French teaches the step of replaying the connection would be

obvious the system continues to run and complete remaining portion of the

uncompleted request.

13.   **As to claim 52**, French teaches the step of the client device includes no software specially in support of an active persistent connection (client just maintains a file describing structure of persistent connection to the server, col. 6 lines 5 – 50).

14.   **As to claim 22**, this is the apparatus claim of claim 1.  See rejection for claim 1 above.

15.   **As to claims 23 – 25,** see rejection for claims 2 – 4 above.

16.   **As to claim 29,** see rejection for claim 8 above.

17.   **As to claim 33**, see rejection for claim 12 above.

18.   **As to claim 37**, see rejection for claims 16 above.

19.   **As to claim 42,** see rejection for claim 21 above.

20.   **As to claim 53**, see rejection for claim 51 above.

21.     **Claims 5 - 7, 9 – 11, 13 – 15, 17 - 20, 26 - 28, 30 – 32, 34 – 36, and 38 – 41 are**

**rejected under 35 U.S.C. 103(a) as being unpatentable over French, US patent no.**

**6,341,312 in view of Delaney, US patent no. 5,996,086.**


22.     Delaney reference was cited in the last office action.


23.     **As to claim 5,** French does not explicitly teach the step of wherein the state is

recorded to a non-volatile storage.

        Delaney teaches the step of the information is stored in the non-volatile storage

(the non- volatile storage of each server is used to store identification information,

specific to the fail-over servers, col. 4 lines 42 – 65).

        It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of French and Delaney's system because

the non-volatile memory storage is necessary for the server to maintain the system

information when the power is off.


24.     **As to claims 6 and 7,** French modified by Delaney teaches the steps of

recording state occurs as part of an elective reboot (Delaney; fo_mode_stop, col. 7 lines

5 – 65 and col. 9 lines 55 - 65) or elective takeover of a server further comprising:

        ignoring current CIFS requests (one of ordinary skill in the art can recognize that

the current request should be temporarily ignored after the system shutdown and before

trying to process all active requests);

processing all active CIFS requests (Delaney; resume messages, col. 9 lines 55

– 65);

recording state (French; col. 5 lines 35 – 42).

25.     **As to claim 9,** French modified by Delaney teaches the step of determining

whether the server shutdown is elective or non-elective is a function of a flag (test

outcome, col. 6 lines 10 – 20) value stored in the non-volatile storage.

26.     **As to claims 10 and 11,** French teaches the step of the flag value indicates the

server shutdown was elective (positive or negative, col. 6 lines 10 – 20) or non-elective.

27.     **As to claim 13,** French modified by Delaney teaches the step of recording state

further comprises the step of determining whether recovery will be accomplished by

rebooting the affected server (the machine is rebooted, col. 6 lines 40 – 45) is a function

of the flag value (the test outcome, col. 6 lines 10 – 20) is stored in the non-volatile

storage.

28.     **As to claim 14,** French teaches the step of the flag value indicates the recovery

will be accomplished by rebooting the affected server (if the outcome is positive, the

routine reconnect the client to the server, col. 6 lines 15 - 45).

29.     **As to claim 15,** French does not teach the step of wherein the flag value

indicates the recovery will be accomplished by takeover by another server.

Delaney teaches the step of the flag value indicates the recovery will be

accomplished by takeover by another server (flag fo_mode_fail_over, col. 7 lines 5 –

col. 8 lines 10).

It would have been obvious to combine the teaching of French and Delaney's

system because Delaney would provide a back up server to keep the system up running

and providing services when a system failure occurs.


30.     **As to claim 17,** see rejection for claim 13 above.


31.     **As to claim 18,** French teaches wherein the reboot comprises the steps of:

rebooting the affected server's operating system (the machine is rebooted, col. 6

lines 40 – 45); and

rebuilding in-memory data structures (inherent when the data structures is saved

in a disk such that when the machine is rebooted, col. 6 lines 40 – 48) to the state prior

to the reboot.


32.     **As to claim 19,** French modified by Delaney teaches the step of wherein the

rebuilding in-memory data structures further comprises fetching the state stored in the

non-volatile storage (Delaney; non-volatile storage, col. 4 lines 42 – 65) to rebuild the in-

memory data structures (French; inherent when the data structures is saved in a disk

such that when ..... rebooted, col. 6 lines 40 – 48).


33.     **As to claims 20,** French modified by Daleney teaches wherein the takeover

(Delaney, failover, col. 8 lines 1 – 10) comprises fetching the stored in the non-volatile

storage (inherent) and rebuilding the in-memory data structures in another server using

the state (French; one of the ordinary skill in the art can recognize that the data

structures has to be rebuild in the in-memory in another server that has to be server

trusted).


34.     **As to claim 26,** see rejection for claim 5 above.


35.     **As to claims 27 – 28,** see rejection for claims 6 – 7 above.


36.     **As to claim 30,** French modified by Delaney teaches the step of determining

whether the server shutdown is elective or non-elective is a function of a flag (French;

test outcome, col. 6 lines 10 – 20) value; the information is stored in the non-volatile

storage (Delaney; the non- volatile storage of each server is used to store identification

information, specific to the fail-over servers, col. 4 lines 42 – 65).


37.     **As to claims 31 and 32,** French teaches the step of the flag value indicates the

server shutdown was elective (positive or negative, col. 6 lines 10 – 20) or non-elective.

38.    **As to claims 34,** see rejection for claim 13 above.


39.    **As to claims 35,** see rejection for claim 14 above.


40.    **As to claim 36,** see rejection for claim 15 above.


41.    **As to claims 38,** see rejection for claim 17 above.


42.    **As to claims 39 - 40,** see rejection for claims 18 - 19 above.


43.    **As to claim 41,** see rejection for claim 20 above.




44.    **Claims 48, 49, and 51 are rejected under 35 U.S.C. 103(a) as being**

**unpatentable over Delaney, US patent no. 5,996,086 in view of French, US patent**

**no. 6,341,312.**


45.    **As to claim 48,** Delaney teaches the non-volatile memory having storage

capable of holding information, the information including the steps of:

    Information identifying the state of a first device (status of the servers, col. 6 lines

19 – 25); and

information identifying a flag value, the flag value indicating a previous operating

mode identifying an elective reboot of the first device to be affected (identification

information includes a flag .... To be booted and fo_mode_stop .... operator requested

reboot, col. 7 lines 5 – col. 8 lines 57).

Delaney does not teach the step of attempting to continue any active CIFX

sessions.

French teaches the step of attempting to continue any active CIFS sessions

(reestablish the connections, replays the connections, col. 6 lines 20 – 48 and col. and

col. 3 lines 25 - 60).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of Delaney and French's system because

French's CIFS session would provide an additional choice of protocols to the network

for more flexibility and variety of means for accessing to the network system.


46.     **As to claim 49**, Delaney teaches the non-volatile memory having storage

capable of holding information, the information including the steps of:

Information identifying the state of a first device (status of the servers, col. 6 lines

19 – 25); and

information identifying a flag value, the flag value indicating a previous operating

mode identifying an non-elective reboot of the first device to be affected (identification

information includes a flag .... To be booted, and fo_mode_stop .... Detected failure,

col. 7 lines 5 – col. 8 lines 57).

Delaney does not teach the step of attempting to continue any active CIFX sessions.

French teaches the step of attempting to continue any active CIFS sessions (reestablish the connections, replays the connections, col. 6 lines 20 – 48 and col. and col. 3 lines 25 - 60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Delaney and French's system because French's CIFS session would provide an additional choice of protocols to the network for more flexibility and variety of means for accessing to the network system.

47.    **As to claim 51**, Delaney teaches the non-volatile memory having storage capable of holding information, the information including the steps of:

Information identifying the state of a first device (status of the servers, col. 6 lines 19 – 25); and

information identifying a flag value, the flag value indicating a previous operating mode identifying an non-elective takeover of the first device by the second device (identification information includes a flag, and fo_mode_fail indicates that the remote server has failed and its network services are being provided by another remote server, col. 7 lines 5 – col. 8 lines 10).

Delaney does not teach the step of attempting to continue any active CIFX sessions.

French teaches the step of attempting to continue any active CIFS sessions

(reestablish the connections, replays the connections, col. 6 lines 20 – 48 and col. and

col. 3 lines 25 - 60).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of Delaney and French's system because

French's CIFS session would provide an additional choice of protocols to the network

for more flexibility and variety of means for accessing to the network system.

**48.     Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over**

**Delaney, US patent no. 5,996,086 in view of Edmonds, US patent no. 6,397,345,**

**and further in view of French, US patent no. 6,341,312.**

49.     **As to claim 50,** Delaney teaches the non-volatile memory having storage

capable of holding information, the information including the steps of:

information identifying the state of a first device (status of the servers, col. 6 lines

19 – 25); and

information identifying a flag value, the flag value indicating a previous operating

mode (identification information includes a flag ....op_mode, col. 7 lines 5 – col. 8 lines

57).

Delaney does not teach the step of the mode includes elective takeover, and

attempting to continue any active CIFX sessions.

Edmonds teaches the step of an elective takeover of the first device by a second

device (fail-over ... locate another server, col. 1 lines 40 - 60).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of Delaney and Edmonds's system

because Edmonds's elective takeover step would provide the takeover server a choice

to takeover the failed server, and to keep the system up running for efficiently.

Delaney and Edmonds do not teach the step of attempting to continue any active

CIFX sessions.

French teaches the step of attempting to continue any active CIFS sessions

(reestablish the connections, replays the connections, col. 6 lines 20 – 48 and col. and

col. 3 lines 25 - 60).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of Delaney, Edmonds, and French's

system because French's CIFS session would provide an additional choice of protocols

to the network for more flexibility and variety of means for accessing to the network

system.

### Response to Arguments

50.     Applicant's arguments with respect to claims 1 – 42, and 48 – 50 have been fully

considered but they are not persuasive; and with respect to claim 50 have been

considered but are moot in view of the new ground(s) of rejection.

51.    Applicant argued in substance that

(1)    French teaches that the software residing on the client machine while applicant's invention provides a seamless continuation of the same CIFS session by manipulation on the server side as to claim 1.

(2)    French does not teach the step of determining automatically whether the processing of a CIFS request is at a point where the state can be reliably recorded.

(3)    French does not teach the step of recording state comprising whether the server shutdown was elective or non-elective as to claim 8.

(4)    French does not teach the step of processing the remaining portion of the uncompleted request as to claim 21.

(5)    French does not explicitly teach the step of wherein the state and flag value are recorded to a non-volatile storage as to claim 5 and 9.

(6)    French does not teaches flag indicating reboot or takeover as to old claims 43 – 47 or new claims 48 – 51.

52.    Examiner respectfully disagrees with applicant's remark

As to point 1, French teaches the step of provides a seamless

continuation of the same CIFS session by manipulation on the server side

(reconnection ..... without the user's awareness, col. 6 lines 20 – 27) as

amended limitation. Examiner does not see that the specification (page 4 lines 1

– 2) shows that there is no software residing on the client machine. It states that

the process is transparent to the clients as French teaches.


As to point 2, French teaches the step of determining automatically

whether the processing of a CIFS request is at a point where the state can be

reliably recorded (it is inherent when maintaining the state information).


As to point 3, the interrupt dues to power failure would cause the server

failures. When the test outcome is negative, the server is shutdown, so the

routine recycle (col. 6 lines 10 – 25).


As to point 4, French teaches the step of replaying the connection would

be obvious the system continues to run and complete remaining portion of the

uncompleted request.


As to point 5, applicant argued in the concept of 102 rejection. It is the

combination of French and Delaney teaches the step of the information is stored

in the non-volatile storage. The non-volatile storage is used to store information

for the computer. So both the state and the flag value are all information and are recorded, it would be stored when the power if off.

As to point 6, examiner did not cite French teaching flag value indicating reboot or takeover.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong N. Hoang whose telephone number is (571)272-3763. The examiner can normally be reached on Monday - Friday 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ph
July 23, 2005

**SUE LAO**
**PRIMARY EXAMINER**